

## **Psychosomatic aspects**

### **Electrodermal activity in adolescent depression**

A. Mestaničková<sup>1</sup>, I. Ondrejka<sup>2</sup>, \*M. Mestanič<sup>1</sup>, I. Hrtanek<sup>2</sup>, E. Snircová<sup>2</sup>, I. Tonhajzerová<sup>1</sup>

<sup>1</sup>Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Department of Physiology and Martin Centre for Biomedicine (Martin, Slovakia)

<sup>2</sup>Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, University Hospital in Martin, Clinic of Psychiatry (Martin, Slovakia)

**Question:** Major depressive disorder (MDD) is mental disorder characterized by dysphoric mood, which may be accompanied by suicidal ideation. It is supposed that MDD is associated with dysfunction of autonomic nervous system (ANS) and with consequent increased risk of cardiovascular complications. However, the studies in pediatric patients are rare. Therefore, we aimed to study the relationship between MDD and autonomic function in adolescence using electrodermal activity (EDA) as an index of sympathetic cholinergic regulation.

**Methods:** We have examined 25 adolescents suffering from MDD without comorbidities and prior to pharmacotherapy (13 girls, age 14.6±0.4 yr.) and 25 age/gender-matched healthy subjects. The EDA was continuously recorded using ProComp Infinity (Thought Technology Ltd., Canada) during 5 minutes of supine rest. Mean value of EDA (in µS) was evaluated for each minute of the recording.

**Results:** In depressive patients, EDA was significantly lower compared to control group during each minute of the rest in supine position ( $p < 0.01$  for all).

**Conclusions:** Our results revealed hypoactivity of EDA in adolescent patients with MDD indicating altered sympathetic autonomic regulation, which could be associated with higher risk of cardiovascular complications. Further research is needed to elucidate the pathway of incompletely understood interaction between MDD and changes of autonomic regulatory outputs in young age.

*Supported by: VEGA 1/0087/14.*